1859MNRAS..20...37P

MONTHLY NOTICES

OF THE

ROYAL ASTRONOMICAL SOCIETY.

VOL. XX. *December* 9, 1859. No. 2.

The Rev. R. MAIN, President, in the Chair.

The Rev. Percival Alfred Fothergill, B.A.,

was balloted for and duly elected a Fellow of the Society.

Unexpected Reappearance of U *Geminorum.* By Norman Pogson, Esq., Director of the Hartwell Observatory.

(*Communicated by Dr. Lee.*)

M. Hermann Goldschmidt, in a letter of the 30th ultimo, announces the premature apparition of this singular star, which must have passed its maximum on Nov. 12th, full 27 days before the time indicated by computation. The following extract from his interesting and important communication will show how zealously he *toils* at his celestial recreations:—

"On the evening of Nov. 18th, I looked for it, and it was brighter than a star I estimated 10·11 magnitude, but to which Dr. Winnecke assigned (*h*) 10·3 magnitude. On the next evening I was surprised to find it less bright, and nearly equal to this star. I was obliged to compare with the list of stars given by Dr. Winnecke, for I want the *Monthly Notices* in which you gave the magnitudes of your comparison stars. On the 20th, 10 hours, it was equal to the stars *d* and *e*. On the 21st, it was on the extreme visibility of my four inches: it even diminished one hour after. On the 22d, *it was painfully seen;* 0·1 magnitude less bright than the small star *b*. On the 23d it had quite vanished, and since my instrument shows 12·4 magnitude, after your scale, 12·5 can be obtained by favourable

Downloaded from http://mnras.oxfordjournals.org/ at Northern Kentucky University on June 18, 2015

© Royal Astronomical Society • Provided by the NASA Astrophysics Data System

1859MNRAS..20...37P

circumstances. I must say that I was constantly for two hours and more in comparing, and favoured by a beautiful sky. I made use of eye-pieces of 36 and 80 magnifying power. At instants I could see the small stars next the variable; *a* and *b* in Dr. Winnecke's list. You may safely trust these observations *laboriously obtained.* I send a diagram of the comparison stars to avoid all mistake. The scale of Dr. Winnecke is in the mean 0·3 magnitude higher than my estimations."

Now, applying these differences to my own standards (*Monthly Notices*, vol. xvii. p. 202),* for comparison with previous observations, we get, for about 11 hours each evening,—

1859.				
Nov. 18	U Geminorum	0·3 mag. brighter than *e*	= 10·7	magnitude.
19	,,	0·1 mag. less than *e*	= 11·1	,,
20	,,	Equal to *g*	12·1	,,
21	,,	A limit of favourable vision	12·5	,,
22	,,	0·1 mag. less than *l*	13·1	,,
23	,,	Invisible	Under 12·5	,,

Well might M. Goldschmidt say of his comparison on the 22d, that "the star was painfully seen," for I estimate *l* (Winnecke's *b*) 13·0, Mr. Baxendell 13·3; and besides his "two hours and more in comparing, favoured by a beautiful sky," he must possess an exquisite eye and telescope (by Steinheil), to peer so far beyond the limit of his aperture as to have glimpsed it at all! But some of his extremely faint planetary discoveries have proved this long since. I can only say that, ordinarily, the star *l* is the limit of the Hartwell equatoreal, and that, with a larger but inferior telescope at Oxford I never saw it at all!

Knowing that U *Geminorum* was not due till Dec. 9th, and being anxious to push forward other work, I am only able to add to my friend's valuable observations one useful record, viz., that U *Geminorum* was invisible and under 13·0 magnitude on Nov. 7th. Now, whatever other anomalies have been displayed by this truly wonderful star, it has hitherto kept in pretty close conformity with a uniform period. My latest elements of variation, viz., Epoch = 1859, Feb. 19·6; Period = 96·879 days; furnish for the six observed maxima, from which they were deduced, the residual errors (Observation—Calculation), + 1·4; + 2·5; — 2·5; + 7·3; + 1·2, and + 0·4 days respectively, the equation, 7·3 days out, having but small weight in regard to the others; but here is an irregularity of 27 days at once, more than a fourth of the entire period! For the future it must be more closely watched.

Hartwell Observatory, Dec. 8, 1859.

---

* Comparison star *h* is certainly under-estimated in my list, and must therefore be rejected.

Downloaded from http://mnras.oxfordjournals.org/ at Northern Kentucky University on June 18, 2015

© Royal Astronomical Society • Provided by the NASA Astrophysics Data System